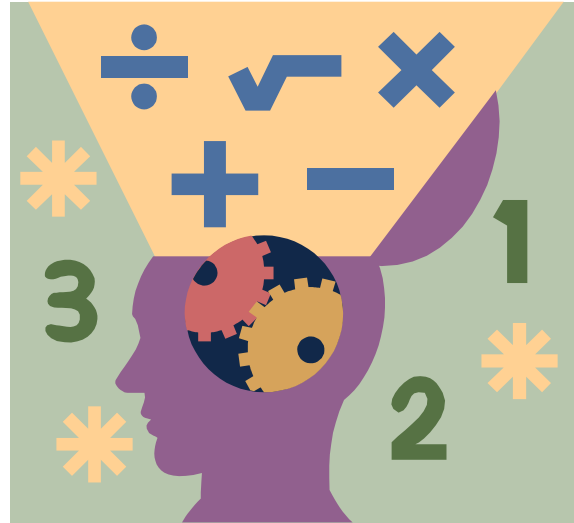


Counting Dangerous Waste

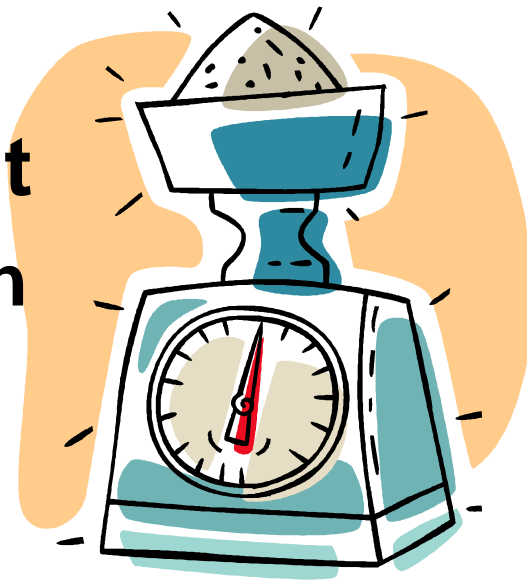


***Are you a
Small, Medium, or Large
Quantity Generator?***

Information To Count

Collecting Information

- ❖ Quantity of DW on-site
- ❖ Quantity of DW generated each month
 - Include satellite accumulation areas
 - Keep a waste generation log!
- ❖ Do not use manifests to count
 - Lumps all waste into one month
 - Inaccurate count
 - (i.e. nominal, not actual weight)



What We Mean When We Say...

- ❖ *Washington state and federal EPA use different terms for the same generator classifications.*
- ❖ Washington SQG = EPA CESQG
 - (Conditionally Exempt Small Quantity Generator)
- ❖ Washington MQG = EPA SQG
 - (No EPA MQG level)
- ❖ Washington LQG = EPA LQG



What We Mean cont.

Some wastes are regulated more closely because they pose greater risks:

❖ Acutely Hazardous Waste (AHW)

- P code wastes, their containers and liners (unless empty and triple rinsed)
- F020-023 and F026-027 code wastes

❖ Extremely Hazardous Waste (EHW)

- WT01 wastes



Small Quantity Generators (SQG)

- ❖ **Generate less than ($<$) 220 pounds/month of DW**
- ❖ **Always have $<$ 2,200 pounds of DW on-site**
- ❖ **Generate and accumulate $<$ 2.2 pounds/month of Acutely or Extremely Hazardous wastes**



Medium Quantity Generators (MQG)

- ❖ **Generate 220-2,200 lbs/month of DW**
- ❖ **Always have < 2,200 lbs of DW on-site**
- ❖ **Generate and accumulate
< 2.2 lbs/month of AHW or
EHW wastes**



Large Quantity Generators (LQG)

- ❖ **Generate $\geq 2,200$ lbs/month of DW**
- ❖ **Accumulate $\geq 2,200$ lbs of DW**
- ❖ **Generate ≥ 2.2 lbs/month of AHW or EHW wastes**
- ❖ **Accumulate ≥ 2.2 lbs of AHW or EHW wastes**



What's the Status?

What if...

- ❖ A facility generates 500 pounds of waste paint thinner (D001) in a month.
- ❖ At the beginning of the month, the facility had 2,100 pounds of waste on-site.

Is the business a SQG, MQG, or LQG?

Answer:

Business is a Large Quantity Generator

- ❖ $500 \text{ lbs/month} < 2,220 \text{ lbs/month}$, but...
- ❖ $2,100 \text{ lbs} + 500 \text{ lbs} = 2,600 \text{ lbs} > 2,200 \text{ lbs}$ onsite



But...they can lower their status by getting the waste offsite before the end of the month count when the higher status applies!

Do Not Count:

❖ Recycled antifreeze

- Properly labeled (“spent”), contained, logged

❖ Shop rags

- Properly labeled, contained, sent to permitted facility

❖ Recycled used oil

- Properly labeled, contained





Do Not Count:



❖ Universal waste

- Mercury thermostats, other mercury (Hg) containing equipment
- Fluorescent lamps/high intensity discharge lamps
- Batteries
- Cathode Ray Tubes (CRTs)

❖ Permit-By-Rule (PBR) wastewater

- Do count PBR residual DW sludge



A Quick Quiz



In a calendar month, a business generates:

- ❖ 125 lbs of D002 caustic solution
- ❖ 75 lbs of D003 oxidizing chemical
- ❖ 15 lbs of dirty shop rags
- ❖ 120 lbs of used batteries
- ❖ 50 lbs of fluorescent light tubes

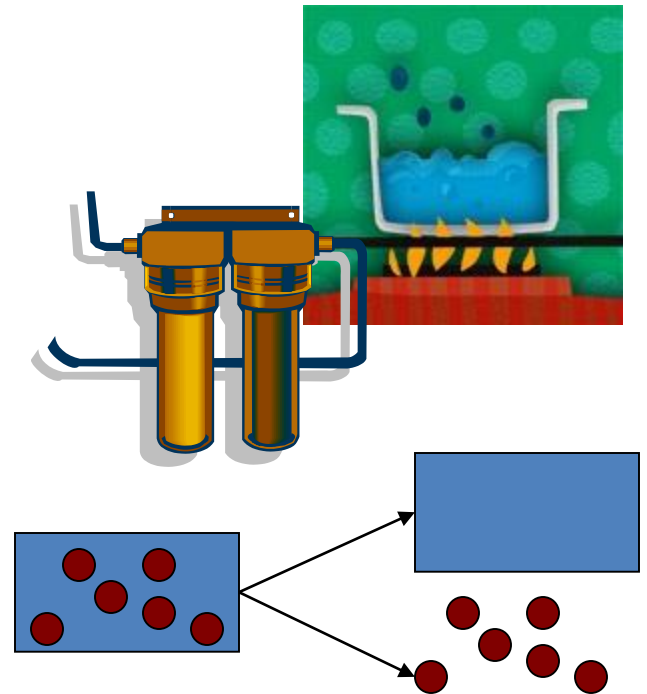
Is the business a SQG, MQG, or LQG?

Answer

- ✓ Business is an SQG
 - ❖ Used shop rags, batteries, and fluorescent lights not counted as DW if handled appropriately
 - ❖ $125 \text{ lbs} + 75 \text{ lbs} = 200 \text{ lbs} < 220 \text{ lbs}$

Treatment By Generator (TBG)

- ❖ Need Ecology approval
- ❖ Prescribed manner
 - Water evaporation
 - Elementary neutralization
 - Filtration
 - Separation
 - Solidification
 - Carbon adsorption



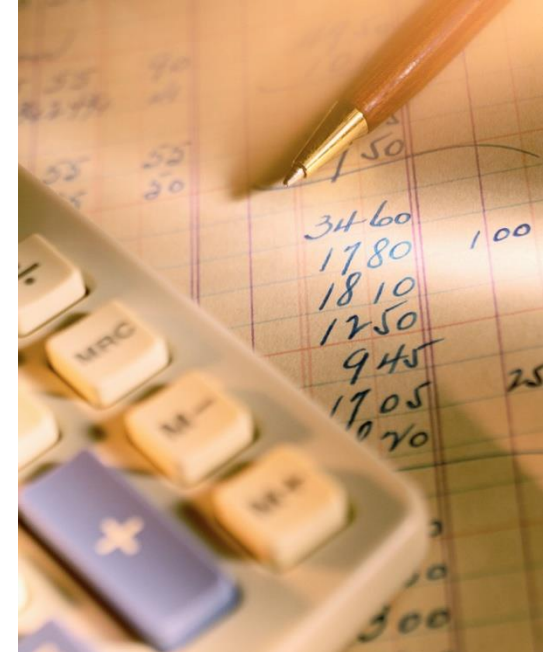
Advantage: Pay less to dispose of less waste

See also *Treatment by Generator*

www.ecy.wa.gov/biblio/96412.html

Treatment By Generator and Waste Counting

- ❖ **Count DW before treatment, and track it on a treatment log**
- ❖ **Designate all residuals**
- ❖ **Count DW residuals, track on a treatment log**
- ❖ **Comply with all waste accumulation regulations**



Quick Quiz #2



What if...

A metal finisher produces 500 pounds of chromium bearing solution (D007) in a month, evaporates off the water, and is left with 50 pounds of sludge that designates for chromium (D007).

How many lbs of Dangerous Waste are counted?

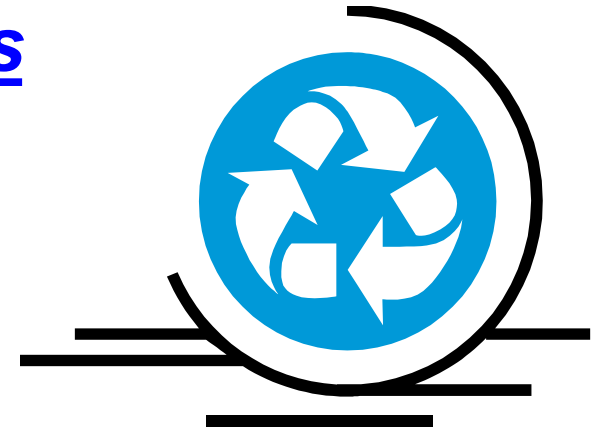
Answer

- ✓ 550 pounds of DW waste total
 - Count it twice since you “made” it twice!
 - But dispose of only 50 pounds of DW

Recycling Exemptions & Credits

WAC 173-303-017

- ❖ More than we can cover here
- ❖ Write down the specifics of your situation.
- ❖ Read:
 - [*Counting Dangerous Waste Under the Dangerous Waste Regulations*](#)
- ❖ Refer to:
 - [*Dangerous Waste Regulations*](#)
- ❖ Figure out what you think
- ❖ Call Ecology!



Counting Rules for Distillation

You Must Count & Log:

- ❖ Largest amount of spent solvent awaiting distillation during the month
- ❖ Still bottoms
- ❖ Spills
- ❖ Evaporation losses (if necessary)
 - Not applicable to fire-code airtight (UL-2208) containers

Distillation is active recycling – it is counted differently than TBG

Distillation Example



An auto body shop generates 2,300 pounds of spent solvent per month, approximately 115 pounds/day. There are no spills or evaporative losses. Assume a distillation solvent recovery rate of 90%.

- What is the generator status assuming no distillation?
- What if the site started batch distilling all of the solvent generated ***weekly***?
- How about ***daily***?

Distillation Example



Given:	2300 lbs/month ← LQG
	90% still recovery rate
Assumptions:	5 work days/week
	4 weeks/month
	7.5 lbs/gallon

COUNTING	115.0 lbs/day
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Distill weekly		
Solvent	575.0 lbs	= 115 x 5
Still Bottoms	230.0 lbs	= 575 x 4 x (1-.90)
TOTAL HW	805.0 lbs	← MQG

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Distill daily		
Solvent	115.0 lbs	= 115 x 1
Still Bottoms	230.0 lbs	= 575 x 4 x (1-.90)
TOTAL HW	345.0 lbs	← MQG